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Conditions for exciting the maximal gas vibration amplitude in a combustion chamber of the Helmholtz resonator type

Iovleva O., Larionov V.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

In this paper, we present the results of calculating conditions for gas vibration excitement, sound pressure frequency and level as a function of mixture composition, geometric burner parameters and the resonator throat with constant capacity. We estimate in quantity the parameters influencing a vibration combustion process in the Helmholtz resonator with the inlet multichannel burner which result in the maximum possible gas vibration amplitude value. © 2012 Allerton Press, Inc.

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Keywords

amplitude, combustion, excitement conditions, gas vibrations